DISPENSING FEATURE WITH BUILT-IN COMBINATION RETENTION AND AD PANEL

CROSS-REFERENCE TO RELATED APPLICATIONS

The present application is a continuation-in-part of U.S. patent application Serial No. 10/179,785, filed June 21, 2002, the disclosure of which is incorporated herein by reference.

TECHNICAL FIELD

The present invention relates generally to paperboard cartons for use in packaging articles and, more particularly, to a dispensing carton with a built-in combination retention and ad panel.

BACKGROUND OF THE INVENTION

Cartons are useful for allowing consumers to purchase, transport and store a desired quantity of articles such as soft drinks. For the convenience of the consumer, some cartons have dispensers which allow the articles to be removed one at a time while continuing to encase the remaining articles. A portion of the carton is torn out to form an opening from which articles may be dispensed.

Unfortunately, more than one article is often dispensed at a time through the opening which leads to many of the articles being dispensed onto the floor. This is because the articles to remain within the open carton are not sufficiently restrained by the open carton.

Also, it is often desirable to have a large surface area on the carton for labeling and

advertising. However, in order to utilize the dispensing features of known dispensing cartons, portions of the carton may be permanently removed or positioned such that the available surface area is reduced.

Therefore, there is a need for an improved carton having a dispenser that is adapted to adequately restrain the articles within the open carton while also facilitating access to the endmost article to be dispensed from the carton. The improved carton must also appeal to the customer while maximizing the available surface area for advertising.

SUMMARY OF THE INVENTION

The present invention provides a carton having a dispensing feature with a built-in retention panel portion adaptable to also be utilized as a promotional flag to allow greater promotional flexibility.

Generally described, a plurality of panels are connected together to form the carton of the present invention. A displaceable portion at an end of the carton may be detached from the carton to define an opening for dispensing the articles from within the carton. Within the interior of the erected carton is a panel portion that is obscured from view prior to the displaceable portion being at least partially detached from the carton. The panel portion is exposed to the exterior of the carton through the opening by at least partial detachment of the displaceable portion from the carton. A distal end of the panel portion extends into the opening for restraining articles within the open carton. The panel portion may also have promotional indicia thereon to allow greater promotional flexibility.

According to one aspect of the present invention, the carton is formed from a single blank of a plurality of panels. At least one bottom panel includes an elongated end flap for forming the panel portion. The end flap is configured to extend into the opening to become visible through the opening from the exterior of the carton after the displaceable

portion is at least partially detached. The distal end of the panel portion restrains the endmost article of a row of articles within the open carton until it is desirable to remove the endmost article from the carton.

The foregoing has broadly outlined some of the more pertinent aspects and features of the present invention. These should be construed to be merely illustrative of some of the more prominent features and applications of the invention. Other beneficial results can be obtained by applying the disclosed information in a different manner or by modifying the disclosed embodiments. Accordingly, other aspects and a more comprehensive understanding of the invention may be obtained by referring to the detailed description of the exemplary embodiments taken in conjunction with the accompanying drawings, in addition to the scope of the invention defined by the claims.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 illustrates a plan view of one embodiment of a blank for forming the carton of the present invention having a built-in retention feature.

Fig. 2 is a perspective view of one embodiment of the carton of the present invention formed from the blank of Fig. 1.

Fig. 3 is a perspective view of one embodiment of the carton of the present invention formed from the blank of Fig. 1 with a portion of the carton removed for dispensing articles and illustrating the panel portion for restraining a lower row of articles.

Fig. 4 is a perspective view of one embodiment of the carton of the present invention formed from the blank of Fig. 1, illustrating the panel portion pivoted outward while continuing to restrain the lower row of articles.

DETAILED DESCRIPTION

Referring now to the drawings in which like numerals indicate like elements throughout the several views, the drawings illustrate an exemplary embodiment of a carton 10 of the present invention. In one embodiment, the carton 10 is for dispensing articles such as beverage cans.

Generally, the carton 10 is formed from a foldable sheet material such as paperboard blank 12 as shown in Fig. 1. The panels of the blank 12 are a first bottom panel 16, a second bottom panel 18, a first side panel 20, a second side panel 22, and a top panel 24. Alternatively, the blank 12 may instead include only a single bottom panel, similarly dimensioned to the top panel, rather than utilizing the combination of the first and second bottom panels 16 and 18 for forming the bottom of the erected carton 10.

As shown in Fig. 1, the panels of the blank 12 are hingedly interconnected in series to one another to form the basic tubular structure of the erected dispensing carton 10. The first bottom panel 16 is hingedly connected to the first side panel 20 by fold line 30. The first side panel 20 is then hingedly connected to the top panel 24 by fold line 32. The second bottom panel 18 is hingedly connected to the second side panel 22 by fold line 34. The second side panel 22 is then hingedly connected to the top panel 24 by fold line 36. The blank 12 further includes a pair of end structures for forming end walls for at least partially closing the opposite ends of the tubular structure. One of the end structures is formed from one minor end flap 48 and four major end flaps 40, 42, 44 and 46 while the other end structure is formed from three minor end flaps 94, 96 and 98 and two major end flaps 100 and 102. The end flaps 40, 42, 44, 46 and 48 are hingedly connected respectively to the panels 20, 22, 16, 18 and 24 by a transverse fold line 28 whereas the end flaps 94, 96, 98, 100 and 102 are hingedly connected respectively to the panels 16, 18, 24, 20 and 22 by a transverse fold line 26. Fold lines 26 and 28 each extends the full length of the blank 12.

The major end flaps 40 and 42 extend from the side panels 20 and 22, respectively. The major end flaps 44 and 46 and the minor end flap 48 extend from the bottom panels 16 and 18 and the top panel 24 respectively and provide the innermost layer of the one of the end walls of the carton 10. The one end wall constitutes at least a part of the dispensing end from where the articles in the carton are dispensed as described in more details later. The end flaps of bottom panels of known dispensers are typically minor flaps. However, the end flaps 44 and 46 of the present invention are elongated to extend beyond the distal end of the minor end flap 48 and, preferably, beyond the distal ends of major flaps 40, 42 as shown in Fig. 1.

The major end flaps 100 and 102 extend from the side panels 20 and 22, respectively. The minor end flaps 94, 96 and 98 extend from the bottom panels 16 and 18 and the top panel 24 respectively and provide the innermost layer of the other end wall of the carton 10. The bottom end flaps 94 and 96 are typical minor flaps and are of a length as great as the minor end flap 98.

In order to erect the carton 10 as shown in Fig. 2, the bottom panel 16 and the bottom panel 18 are glued or are otherwise secured together to form the bottom of the carton 10. At the same time, the side edges 52 and 54 of the major flaps 44 and 46 are also secured together in an overlapping manner to create a composite bottom major flap. The side edges of the minor flaps 94 and 96 are also secured together to form a composite bottom minor flap. After the carton is erected in an open-ended tubular form and the articles are loaded into the carton 10, the end structures are folded to form the opposed end walls of the carton 10. .

Closure of the dispensing end of the carton 10 is initiated by folding the top end flap 48 along the fold line 28 through about 90 degrees and then folding the composite bottom major flap 44 and 46 along the fold line 28 through 90 degrees. Next, the side major end

flaps 40 and 42 are folded along the fold line 28 over the end flaps 44, 46 and 48, and the distal ends of major flaps 40 and 42 are secured together in an overlapping manner to create an outermost layer of the one end wall of the carton 10. Closure of the other end of the carton may be achieved in a similar manner.

The erected carton 10 illustrated in the drawings is adapted to hold a group of similarly dimensioned, cylindrical articles (such as cans or bottles), in a plurality of vertically arranged rows (two rows in Figs. 2 and 4). The articles in each row are disposed on their sides in a side-by-side parallel fashion. The side panels 20, 22 are disposed alongside the ends of the articles of the group while each end flap of the carton is disposed adjacent to the side walls of the respective endmost articles.

In one embodiment of the present invention, a weakened line 60 extends across each major panel 40 and 42, side panels 20 and 22, and top panel 24, as best shown in Fig. 1. The weakened line 60 on the top panel 20 is displaced from the dispensing end of the carton 10. Portions of the carton that lie on either side of the weakened line 60 may be severed from one another along the weakened line. In one embodiment, the portion of the weakened line 60 across the major flaps 40 and 42 is a fold line segment that serves as a hinge about which opposing panel portions may be pivoted with respect to one another while the other portion of the weakened line 60 is a tear line segment along which the carton panels may be severed.

The weakened line 60 is used as a reference for defining the lower portions 62, 64 and upper portions 66, 68 of the major flaps 40, 42. The weakened line 60 may be a line of severance or a hinge-providing line that facilitates separation or folding of the panel portions lying on either side of the weakened line 60. It is contemplated that weakened lines include, but are not limited to, perforated lines, tear strips, score lines, half-cut lines, lines of short slits, lines of nick members, or the equivalents.

The weakened line 60 terminates at edges 56 and 58 of the major flaps 40 and 42, respectively. The full extension of the weakened line 60 defines a displaceable portion 70 when the carton 10 is erected. The displaceable portion 70 may be configured as shown in Figs. 2 and 3, or alternatively configured into what is commonly referred to as a "trough" or "bucket". The displaceable portion 70 is at least partially detachable from the carton 10, as shown in Fig. 3, to form an opening to permit dispensing of the articles from the carton 10. A tab 72 borders the weakened line 60, preferably on the top panel 24, which may be pushed through or pulled out to initiate detachment of the displaceable portion 70.

The weakened line 60 allows the upper portion 66 of the major flap 40 and the upper portion 68 of the major flap 42 to be removed from, or pivoted with respect to, the erected carton 10. The upper portions 66, 68 removed from, or pivoted with respect to, the overlapping major flaps 40, 42, along with portions of the side panels 20, 22, and the top panel 20, define the preferred configuration of the displaceable portion 70. The combined lower portions 62, 64 of the major end flaps 40, 42 remain with the carton 10 after the displaceable portion 70 has been removed or pivoted downwardly. The upper edge 74 of the combined lower portions 62, 64 partially defines the opening through which the packaged articles are dispensed.

The bottom major end flaps 44, 46 each also includes a weakened line 76 such as a fold line or a frangible/tear line for defining on either side distal panel portions 78, 80 and proximal panel portions 82, 84. In some embodiments, portions of the end flaps 44, 46 that lie on either side of the weakened line 76 may be severed from one another once the carton 10 is erected and opened. Each weakened line 76 is preferably substantially parallel to transverse fold line 28. When end flaps 44, 46 are secured together to erect the carton 10, the weakened lines 76 of the end flaps 44 and 46 cooperate with one another to substantially form a continuous line 76 across the width of the composite bottom major flap 44 and 46. The full extent and orientation of the weakened line 76 then preferably

corresponds substantially with the adjacent upper edge 74 of lower portions 62, 64.

Until the displaceable portion 70 is at least partially detached from the remainder of the carton 10, the combined distal panel portions 78, 80 are obscured from view. Because the end flaps 44, 46 are the innermost layer of the end wall at the dispensing end of the erected carton 10, the proximal panel portions 82, 84 are behind the lower portions 62, 64 of the end flaps 40, 44 in a face-to-face relationship. This face-to-face relationship is maintained even after the displaceable portion 70 is completely detached from the carton 10. Only after the displaceable portion 70 is at least partially detached from the carton 10, are the combined distal panel portions 78, 80 visually exposed to the exterior of the carton 10 through the opening.

As best shown in Figs. 3 and 4, the combined distal panel portions 78, 80 extend beyond the upper edge 74 and into the opening. The combined distal panel portions 78, 80 may be utilized to retain the endmost article in the lower row of articles, yet allow removal of the endmost article when desired by the consumer. Alternatively, the combined distal panel portions 78, 80 may be utilized to retain the endmost article in both the upper and lower rows of articles when the blank 12 is configured differently such that the bottom end flaps 44 and 46 are greater in vertical length than the diameter of each cylindrical article packaged in the carton 10.

As shown in Fig. 4, the combined distal panel portions 78, 80 may be folded or pivoted along the weakened line 76 relative to their corresponding proximal panel portions 82, 84. Even though the combined distal panel portions 78, 80 are pivoted outward over the upper edge 74, the endmost article may continue to be restrained within the carton 10.

In one embodiment, the combined distal panel portions 78, 80 may include a graphic surface facing outwardly of the carton. The graphic surface carries indicia such as advertising which becomes visible to the consumer upon opening the carton 10 for

dispensing articles. The indicia may be such that the combined distal panel portions 78, 80 serve as a voucher/coupon or a game piece (such as a lottery ticket). In such case, the weakened line 76 may be a line of severance or a tear line so that the voucher or the game piece may be detached from the proximal panel portions 82, 84 along the weakened line 76.

The present invention has been illustrated in relation to a particular embodiment which is intended in all respects to be illustrative rather than restrictive. Those skilled in the art will recognize that the present invention is capable of many modifications and variations without departing from the scope of the invention. Accordingly, the scope of the present invention is described by the claims appended hereto and supported by the foregoing.

What is claimed is: